

Circumference of outside branches.....	446 feet.
Lineal measure of south branch.....	105 feet.
Diameter of trunk 8 feet high.....	9 feet.
Estimated age of tree ¹	1000 years.
Number of persons, 2 square feet to each person, under shade.....	7885.

The tree has also received very careful surgery, and it is wired in all directions.

After rising the next morning, we collected a few things in flower; took a swim in the creek, and then drove up to Richardson's Springs, which is about 10 miles above Chico, in a narrow hot canyon. We picked up a few plants there, and then drove across the valley.—H. A. DUTTON, Aug. 12, 1921.

OPEN LETTERS

Quercus morehus in the San Bernardino Mts.

Under separate cover I am sending you specimen of oak leaves and acorn and ask you to please identify them for me. I found them near Camp Radford, San Bernardino Mts.—growing in a circle-shaped clump—about 50 trees in group, from 1 to 8 inches in diameter and about 25 feet high. The Black Oak, *Quercus Californica*, and Cañon Live Oak, *Quercus chrysolepis*, are growing all thru that section—and the only species there (except *Quercus dumosa*). Is this a hybrid of the two? It has characteristics of both. Is there such a hybrid recorded?—BERTHA ANTHONY, Oct. 30, 1921.

The material represents *Quercus morehus* Kell. This has been taken by some botanists as a hybrid, tho others do not so regard it. It is sometimes contended, and as frequently disputed, that hybrids are not found beyond the range of their parents. This tree, if it be a hybrid, is usually if not always fertile and is now known to be widely distributed in California.—W. L. J.

REVISION OF THE CALIFORNIA SPECIES OF THE GENUS DOWNINGIA TORR.

WILLIS LINN JEPSON

The opinion is sometimes expressed that the more recently described species of *Downingia* are too much alike. These small annuals do resemble each other in a general way very strikingly. They are all dwarfs and have essentially the same habit and vegetative characters. That for the most part they are definite specific units is shown, however, by the evidence here presented. I have had opportunity to study them carefully in the field and note results on the spot. It has been gratifying to discover additional facts

¹No individual of this species has been known to reach such an age. It is probably not over two or three centuries old and could easily have reached its present size in a century and a half.—W. L. J.